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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,131	09/06/2000	Hiroshi Yamaguchi	Q59329	9189

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EXAMINER

HANEY, MATTHEW J

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/656,131

Applicant(s)

YAMAGUCHI, HIROSHI

Examiner

Matthew Haney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 11, 13-15, 17-18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Edgar (US 5,266,805).

As for claims 1, 13 and 18, Edgar teaches of a detecting device for detecting defect portions in an image represented by electronic information (Column 4, Lines 30-67); a deciding device for selecting a correction method from among a plurality of types of correction methods for correcting a defect portion, or for deciding a range of application of each of at least two correction methods correcting a defect portion; a correction device for correcting defect portions in the electronic information by applying the correction method selected by the deciding device (Note: Edgar shows one way in which this can be done is by the intensity of the imperfections, one method is shown in Column 6, Lines 39-58 and another in Column 6, Lines 59-68).

As for claims 2 and 14, Edgar teaches of electronic information represents an image recorded on image recording material, and the detection device detects defect portions in the image from data obtained from irradiating the image recording material on which the image is recorded with non-visible light, and photoelectrically converting

non-visible light after irradiation of the image therewith to produce said data (Note: Infrared light is used to detect the defects, Column 6, Lines 3-17).

As for claims 3 and 15, Edgar teaches of deciding device selects the correction method or decides the application ranges using at least one characteristic of the defect portion selected from the group consisting of: a correlation of density changes in each component color in an area adjacent to the defect portion; density distribution in areas surrounding the defect portion of the image; an information as to whether the defect portion is present within a principal area of the image or not; and extent of overlap of the defect portion with a principal area of the image (Note: the pixels of the four wavelengths are each taken into account with the process disclosed in Edgar, Column 8, Lines 41-68 and Column 9, Lines 1-53).

As for claim 4, Edgar teaches of deciding device selects the correction method or decides the application ranges based on at least one of an amount of transmitted or reflected non-visible light in an area adjacent to the defect portion, and a correlation between a change in an amount of transmitted or reflected non-visible light in an area adjacent to the defect portion when the non-visible light is irradiated onto the image recording material, and a change in an amount of transmitted or reflected visible light in an area adjacent to the defect portion when visible light is irradiated onto the image recording material (Column 12, Lines 26-39).

As for claim 5, Edgar teaches of plurality of types of correction methods include an interpolation method in which information for correcting a defect portion obtained by interpolation from information in an area surrounding the defect portion (Column 12,

Lines 26-39), and a brightness adjustment method in which image information is corrected such that the brightness of a defect portion changes (Column 9, Lines 13-33).

As for claims 6 and 7, Edgar teaches of a predetermined plurality of wavelength regions from among non-visible and visible light regions is irradiated onto the image recording material, then if the amount of non-visible transmitted light in the defect portion is less than the amount of non-visible transmitted light in an area surrounding the defect portion, and if the amount of transmitted light of at least one wavelength region from among the plurality of wavelength regions in the defect portion is greater than the amount of transmitted light in the area surrounding the defect portion, the deciding device selects as the correction method an interpolation method in which information for correcting a defect portion is obtained by interpolation from information in an area surrounding the defect portion (Column 12, Lines 1-66).

As for claims 11, 17, and 20, Edgar teaches of a calculation device for calculating a brightness alteration amount for correcting a defect portion in the image based on an amount of transmitted or reflected non-visible light in an area adjacent to the defect portion when light is irradiated onto the image recording material, and a difference in the refractive indexes of visible light and non-visible light in the image recording material; and a correction device for correcting electronic information representing the image such that the brightness of the defect portion of the image represented by the electronic information changes by an amount calculated by the calculation device (Column 6, Lines 59-68, Column 7, Lines 1-9 and Column 9, Lines 13-53).

3. Claims 8-10, 16, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiramatsu (US 4,933,983).

As for claims 8, 16, and 19, Hiramatsu teaches of a feature amount calculation device for use with electronic information representing an image having a defect portion, the feature amount calculation device being for calculating respective amounts of image features in a plurality of different directions from within defect portions; an individual correction value calculation device for obtaining interpolation correction values for correcting the defect portion from information through areas of the image in each of the plurality of directions (i.e. main scan direction and sub scan direction) ; a final correction value calculation device for obtaining, based on amounts of image features of each direction calculated by the feature amount calculation device, a final correction value from correction values calculated for each direction by the individual correction value calculation device; a correction device for correcting the defect portion in the electronic information representing the image, using a final correction value calculated by the final correction value calculation device (Column 23, Lines 12-50, Column 29, Lines 60-68, and Column 30, Lines 1-42).

As for claim 9, Hiramatsu teaches of image feature amount, the feature amount calculation device calculates for each of a plurality of directions at least one of: a density change in the image along a predetermined direction; a change in an amount of non-visible light along a predetermined direction transmitted through the image recording material or reflected by the image recording material when non-visible light is irradiated onto an image recording material on which an image represented by the image

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information is recorded; a number of defect pixels present on the image within a fixed distance along the predetermined direction; and a distance traced along the image to a point in a predetermined direction at which normal pixels begin to appear, which do not correspond to a defect portion (Note: defect pixels are detected within a fixed distance and can also be traced, Column 29, Lines 60-68, and Column 30, Lines 1-42).

As for claim 10, Hiramatsu teaches of least one of the feature amount calculation device and the individual correction value calculation device performs for each of the plurality of directions a calculation to determine the image feature amount or the correction value in a range as far as to a point, when tracing along the image in a predetermined direction, at which a fixed number of normal pixels begin to appear, which do not correspond to a defect portion (Note: the scan must atleast do the next picture element after a defect one in order to tell if the next is normal or not it order to see if the defect is short or long, Column 23, Lines 11-42).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US 5,266,805) in view of Tung (US 3,758,193).

As for claim 12, most of the limitations of the claim are contained in the above

rejection of claim 11. Edgar does not specifically teach of calculating a high frequency ratio, however, it is considered well known to one of ordinary skill in the art at the time of the invention that this ratio could be used in order to see how much the light is being affected by defects and it could then be used in a calculation to change the intensity (Tung: Column 1, Lines 55-63 and in claim 1). (Official Notice)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew Haney whose telephone number is 703-305-4915. The examiner can normally be reached on M-Th (5:30-3:00), Every Other Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Matthew Haney

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